United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property

historic name **Cushman Substation**

other names/site number

2. Location

street & number 3713 North 19th Street ☐ not for publication

city or town Tacoma ☐ vicinity

state **Washington** code **WA** county **Pierce** code 053 zip code 98406

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this ___ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property ___ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ national ___ statewide __local

Applicable National Register Criteria

___ A ___ B __C ___ D

Signature of certifying official/Title Date

WASHINGTON SHPO
State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official Date

Title State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register ___ determined eligible for the National Register

___ determined not eligible for the National Register ___ removed from the National Register

___ other (explain:)

Signature of the Keeper Date of Action

Cushman Substation
Name of Property

Pierce, Washington
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply.)

	private
X	public – Local
	public – State
	public – Federal

Category of Property
(Check only **one** box.)

X	building(s)
	district
	site
	structure
	object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1		buildings
		district
		site
1	1	structure
		object
2	1	**Total**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions.)

Government: Public Works

Current Functions
(Enter categories from instructions.)

Industry/Processing/Extraction: Industrial Storage

Vacant/Not in Use

7. Description

Architectural Classification
(Enter categories from instructions.)

Late 19th and 20th Century Revivals: Classical Revival, Neoclassical Revival

Materials
(Enter categories from instructions.)

foundation: Concrete

walls: Concrete

roof: Concrete

other:

Narrative Description

Summary Paragraph

The Cushman Substation is located at 3713 North 19th Street in Tacoma, Pierce County, Washington, in the southeast quarter of Section 36, Township 21 North, Range 2 East, of the US Geological Survey Tacoma North Quadrangle. The nominated parcel includes the substation building (contributing), adjacent outdoor switchyard (noncontributing), and the North 21st Street Towers (contributing) which collectively occupy an entire city block bordered to the south by North 19th Street, the west by North Adams Street, the north by North 21st Street, and the east by North Washington Street.

The three-story Cushman Substation building occupies the southwest quadrant of the block and fronts south on North 19th Street. Park-like landscaping highlights the main entrance, which is centrally located on the south façade and is adorned with a monumental distyle temple front. The building is constructed of board-formed poured concrete, with a projecting concrete cornice articulating the top of a full entablature supported by engaged pilasters. Designed in the Tuscan order, the simplified Doric pilasters that define the second and third floors sit atop a pedestal (the first floor) comprising a raked dado and unadorned plinth. The most predominant feature of the Cushman Substation is its metal-sash windows, found on all stories on each side of the building, with window bays comprising three banks of 24-light windows separated by metal mullions.

Narrative Description

The substation building and outdoor switchyard occupy an entire city block, bordered to the south by North 19th Street, the west by North Adams Street, the north by North 21st Street, and the east by North Washington Street. The substation building occupies the southwest quadrant of the block, and fronts south on North 19th Street; park-like landscaping highlights the main entrance. The switchyard occupies the northwest quadrant of the block. The eastern half is partially graveled, partially paved, and features concrete pad foundations for equipment no longer extant at the site. The North 21st Street transmission line, a now discontinuous segment of the historic Potlatch (Cushman) Transmission Line,

1. Cushman Substation

The Cushman Substation building is rectangular in plan, is three stories tall, and has a basement. The building is constructed of board-formed poured concrete, including the foundation, walls, and exterior cladding. Seven bays wide by four bays deep, the building has a shallow-pitched gable roof, which is hidden by a shallow concrete parapet. The roof also features a shed-roof penthouse in the northwest corner that denotes the location of the interior elevator shaft. Below the parapet, a projecting concrete cornice articulates the top of a full entablature, supported by engaged pilasters. Designed in the Tuscan order, the simplified Doric pilasters that define the second and third floors, which sit atop a pedestal (the first floor) comprising a raked dado and unadorned plinth.

The main entrance is centrally located on the south façade and is adorned with a monumental distyle temple front. Accessed via concrete stairs that define the stereobate, the pediment, tympanum, and Tuscan columns of the temple-front entryway are unadorned; the fully articulated entablature features the words “Cushman Substation” in the frieze. The tripartite doorway has a single-light wood door accentuated by engaged Tuscan Doric columns, and flanked by twelve-light sidelights of beveled glass with engaged pilasters at the corners.

The doorway also features an entablature, with decorative dentils below the frieze. Original metal hardware on the door appears to be intact.

The west side is devoid of entrances; other entryways, found on the north and east elevations, are industrial and/or utilitarian. These include the large metal roll-up door on the east elevation, with an inset pedestrian door; the second-floor entrance on the east elevation, accessed via an exterior metal stairway; the ground-floor pedestrian door on the east corner of the north elevation; and another metal roll-up door located in the center bay of the north elevation. With the exception of the main entryway door on the south elevation and the large metal roll-up door on the east elevation, both of which are depicted in original blueprints, all other doors appear to be modern.

The most predominant feature of the Cushman Substation is the industrial metal-sash windows. Found on all stories on each side of the building, the window bays comprise three banks of 24-light windows separated by metal mullions, for a total of 12-light by 6-light window bays. Each bay includes two operable 8-light hoppers, one each in the outside bank. The only exception to this configuration is on the second floor of the east side, where a doorway (described above) has been added to one of the window bays.

Original cast-concrete light poles flank the stairway to the main entrance. The light poles are also located on the corners of the south elevation, as well as symmetrically arranged on the west elevation, for a total of seven poles currently extant. The light poles originally featured glass globes, though these have been replaced with plastic globes or, in some cases, are missing altogether.

The interior of the Cushman Substation maintains the original massing and form as originally constructed; however, all operating equipment has been removed, and the building is used primarily for storage. The south half of the building is one large open room, three stories tall, historically known as the Condenser Room. This main area once housed the machinery (condensers) necessary for the substation, and still features original details, such as sconces with glass globes; gantry crane; engaged pilasters on interior walls; and the exposed, board-formed concrete beams and ceiling that support the roof structure. Some modern lighting has been installed on the ceiling beams. One original metal stair, with industrial “pipe-fitting”-style handrails, accesses the second floor from the main room; a second stairwell was historically present, but was removed at an unknown date.

The north half of the building is horizontally divided between the first, second, and third floors. Historically, the first floor served as the Feeder Switch Room, with a small bathroom and locker room in the northeast corner. The second floor was divided between the shop (west), the Condenser Switch Room (center, not to be confused with the condenser room on the south side of the building), and the Control Room (east). The third floor served as a storeroom, as well as having smaller spaces in the northeast corner for the Battery Room, the “M. G. & Carrier Current Room,” and the Load Dispatchers Office (also the location of the facility’s second restroom). The roof is accessed via a metal stairway adjacent to the elevator shaft in the northwest corner. It is possible that some original slate panels are present in the control room behind the modern equipment; however, all switches and other components are no longer extant. If extant, original slate panels are hidden behind modern control stations and are likely used for partial structural support of same.

The basement level is accessed via a concrete stairwell at both the east and west ends of the Condenser Room on the first floor. The basement, historically, held a series of feeders, transmitters, and bus reactors; provided access to the machinery in the Condenser Room; and served as a storage area. Four large oil tanks, two for circuit-breaker oil and two for transmission oil, are still imbedded in the east wall of the basement. Three underground tunnels, two on the east and one on the north side of the building, provide access to the exterior switchyard.

With the exception of wholesale removal of interior equipment, alterations to the building itself have been fairly minor. For example, a door on the second floor of the east elevation was cut into a window; this change utilized the existing window space and, with the exception of the removal of some window panes, did not require removal of building fabric. Other alterations include the removal of light poles on the exterior of the building. Analysis of historic photos indicates that the substation originally had eight light poles on the south side and five on both the east and west sides.

2. Switchyard

The switchyard is located adjacent to the Cushman Substation building, occupying the northwest quadrant of the block. The eastern half is partially graveled, partially paved, and features concrete pad foundations for equipment no longer extant at the site. The switchyard was constructed concurrently with the substation, but has been modified over the years as bussing and other equipment was upgraded for efficiency and safety standards. The switchyard is a non-contributing, functionally-related structure to the Cushman Substation nomination.

3. North 21st Street Towers

The North 21st Street Towers are a collection of original steel lattice towers located in the median between the east- and west-bound traffic on North 21st Street between N Highland Street and N Adams Street in Tacoma. The towers historically connected the Cushman Substation with the Cushman No. 1 development, and are a segment of the overall Potlatch (Cushman) line. The approximately 1.25 mile segment retains 16 of the historic 230-kV double circuit, steel lattice towers. The towers are approximately 120 feet tall, with four legs (set on concrete footings or a poured concrete pad) rising in a pyramidal shape to a rectangular top with two sets of three arms, one on each the north and south sides of the towers. The arms support transmission cables, conductors, insulators, and mounting equipment. These structures are original to the Cushman electric power generation and transmission system, retain integrity of design, materials, workmanship, feeling, association, setting, and location, and are a contributing, functionally related structure to the Cushman Substation.

Cushman Substation
Name of Property

Pierce, Washington
County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)

Architecture
Community Planning and Development

Period of Significance

1926–1949

Significant Dates

1926: Date of Construction
1949: Date power was rerouted

Significant Person
(Complete only if Criterion B is marked above.)

n/a

Cultural Affiliation

n/a

Architect/Builder

Verne Gongwer (Designer/Engineer)
James Parker (Preparer: Perspective and Plans)
A. F. Darland (Electrical Construction)
Dougan & Chrisman (Builders/Contractors)

Statement of Significance Summary Paragraph
(Provide a summary paragraph that includes level of significance and applicable criteria.)

The Cushman Substation is the urban embodiment of the City of Tacoma's achievement in hydroelectric power production via development of the Cushman Hydroelectric Project. The substation housed the means for efficient and economical distribution of electricity, which enabled the region to grow and expand and, therefore, made the Cushman Substation one of the most important and influential buildings of its time. The monumental architectural style reflected this ideology, creating a visual statement as to the importance of the city's recently completed municipal hydroelectric system.

As such, the Cushman Substation is eligible to the National Register at the local level for significance under Criterion A, associations with broad patterns of history, for the role it played in the growth of the city of Tacoma and the region due to the development of hydroelectric generation and its subsequent effect on the availability of affordable electricity.

The Cushman Substation building is also eligible for listing in the National Register of Historic Places (NRHP) at the local level for significance under Criterion C, architecture. The Cushman Substation is an excellent example of monumental neoclassical revival style architecture, with which the City of Tacoma built the Cushman Hydroelectric Project facilities in the 1920s. The only urban building constructed for the Cushman Hydroelectric Project, the Cushman Substation is a visual representation of the importance of public energy facilities to growth in the region.

The period of significance is 1926–1949: the date construction was completed through the date the transmission line was rerouted to terminate at the Pearl Street Substation.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

In 1893, the City of Tacoma bought Charles Wrights' Tacoma Light and Water Company, thereby becoming one of the first cities in the Pacific Northwest to own and operate a municipal electrical system.[1] Known for political Progressivism, the Pacific Northwest was at the vanguard of the reform movement to control utilities' cost and quality by placing them under public ownership. In the mid-nineteenth century, most American cities awarded franchises to private utility companies, but reformers in the Progressive Party targeted the system's potential for graft, favoritism, and corruption. They maintained that a publicly owned utility would not only eliminate unsavory collusion among private businessmen and public officials but also promote more efficient management.[2] Unlike older cities in the American East and Midwest, Tacoma was able to move quickly toward a more democratic utility system.

After the 1893 purchase, the former Tacoma Light and Water Company became part of the City of Tacoma's Light Department, a division of the city formed to provide municipal lighting and power. The division was operating under the name Tacoma City Light by 1915, a name it would maintain until 1989, after which the organization continued doing business under the name Tacoma Power.

[1] Dick Malloy and John Ott, *The Tacoma Public Utilities Story: The First 100 Years, 1893–1993* (Tacoma, WA: Department of Public Utilities, 1993), 13.
[2] Robert Wiebe, *The Search for Order, 1877–1920* (New York: Hill & Wang, 1967), 166–72.

By the turn of the twentieth century, growing consumer demand had overtaxed the direct current system, and the city had to purchase additional power from private companies in the region. In 1909, Tacoma voters authorized construction of a hydroelectric generating facility on the Nisqually River. Attempts to develop a power plant on the North Fork of the Skokomish River at Lake Cushman actually began in 1912, when Seattle citizens approved a related bond issue. The City of Seattle issued condemnation notices to property owners, but abandoned the project in 1914.[3]

By 1917, Tacoma was experiencing a population explosion and needed a new source of electric power to meet the increasing demands of domestic labor-saving devices and power-dependent industries. Public Utilities commissioner Ira S. Davisson and Tacoma City Light reselected the Lake Cushman site for a new hydroelectric complex. The city applied for water rights and reservoir permits in 1919, and began condemnation proceedings the same year for the needed land.

In 1922, Davisson hired Jay L. Stannard from San Francisco to serve as chief engineer for the Cushman project. While some of the interviewees for the position wanted as much as $35,000 a year, Stannard offered his services at the bargain rate of $7,500. He explained, “it’s just what I wanted to do . . . I made a thorough investigation of the Cushman project in 1917 with the idea of doing it for Seattle and have always wanted to develop the project.”[4] Jay Stannard was born to Gilbert and Esther Stannard in New York in 1866. By 1880, the family had relocated to Shell Rock, Iowa, in a westward trend that Stannard would continue all the way to Washington. By 1900, Stannard and his wife Carrie, whom he married in 1899, were lodging in Everett, Washington. Stannard worked with the Great Northern Railway as early as 1902, when he led a survey from Columbia Falls to Tobacco Plains in Flathead, Montana.[5] Stannard also spent time in Oregon, where he was employed by the city of Baker as consulting engineer for a municipal hydroelectric project.[6] An August 1917 edition of *Electrical Review* noted, “J. L. Stannard, Portland, Oregon, is consulting engineer in connection with the proposed hydroelectric plant for the City of Seattle. He has made plans and estimates covering all phases of the contemplated project.”[7] By the time Cushman was proposed for Tacoma, Stannard’s career as a civil engineer appears to have been well established.

The contract for construction of the first Cushman dam (built near Hoodsport) was let to Guthrie & Company of Portland, Oregon, in spring 1924. (Guthrie & Company would also later be awarded the contract for construction of the Cushman No. 1 powerhouse under a separate bid.) Work on the tunnel shafts began first, on May 1, 1924, and peaked in 1925. After a two-year construction period, Lake Cushman began rising to fill the valley. The Cushman Powerhouse No. 1 was constructed concurrent with the dam, beginning in spring 1925 and completed in March the following year. Located 700 feet downstream of the dam, the building housed the water turbines and generators, as well as the exciter switchboard and control room.

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[3] Loretta Neumann, William Beckner, Janet Friedman, Steve DelSordo, and John Culliname, *Cultural Resource Management Plan: Cushman Hydroelectric Project*, submitted to Tacoma Public Utilities, Tacoma, WA, 1996, A3-9, on file at Tacoma Public Utilities, WA.
[4] Malloy and Ott, *Tacoma Public Utilities Story*, 84.
[5] “Surveying and Speculation Continues in Flathead,” *The Inter Lake*, January 3, 1902, Great Northern Railway, Kalispell Division, http://www.gnry.net/lookingback/lbi1900s.html#1902.
[6] “News Notes,” *Journal of Electricity, Power, and Gas* 33 (December 26, 1914): 589.
[7] “Personal and Biographical,” *Electrical Review* 71, no. 6 (1917): 250.

To distribute the power of the water, 44 miles of transmission lines were constructed to carry the full load capacity of the Cushman No. 1 powerhouse. The first 5 miles carried the line to the future site of the Cushman No. 2 powerhouse (completed in 1930). The remaining 39 miles carried the power into Tacoma, crossing the Skokomish Flats, the two relatively benign water crossings at North Bay and Henderson Bay, and the daunting Narrows Crossing, a particularly treacherous and windy water corridor almost a mile wide. When the transmission line across the Narrows was completed in 1925, the approximately 6,244-foot-long span was the longest aerial electrical span in the world, with pairs of 315-foot-tall steel towers supporting cables that carried Cushman power across the Narrows to the city.[8] The line continued into Tacoma via North 21st Street, terminating at the Cushman Substation.

Original blueprints of the Cushman Substation, dated December 3, 1924, and on file with Tacoma Power, reference Structural Engineer J. Verne Gongwer, Superintendent of Electrical Construction A. F. Darland, and, of course, Chief Engineer Jay Stannard. Additionally, James Parker is thought to have prepared the plan and perspective drawings, though it is unknown to what extent he was involved in the design phase.[9]

Verne Gongwer, an engineer from Michigan, would later be known as the "hero" of the Cushman Substation. Using his "engineer's know-how," he designed the building without the aid of degree in architecture. He is even credited for concocting "a shortcut for spiffing up the substation," specifically the Greek Revival entry and buffed concrete finish. Gongwer is also credited with the design of the Tacoma Narrows crossing of the transmission line.[10]

Alvin F. Darland served as the superintendent of electrical construction for the entire Cushman Hydroelectric Project. "Reared and educated in Tacoma," Darland graduated from Stadium High School and, in 1914, the University of Washington. He began his electrical career at the Todd Drydock & Construction Corporation, working on the electrical installations of the yard as well as the US cruisers built there. He joined the Tacoma Light Department around 1916, and began work on the Cushman Project in April 1923. He is credited with the "splendid electrical layouts of the Cushman (No. 1) power house, substation and transmission lines."[11]

Bidding for the contract to construct the Cushman Substation was closed in December 1924. Sixteen contractors submitted twenty proposals, with cost estimates ranging from $166,470.80 up to $241,656.05. The lowest bid was received of Dougan & Chrisman of Seattle, and included construction of the substation building, the tunnels, footings for the exterior switchyard equipment, and the steel structures to support the heavy bus connectors. The firm was officially awarded the contract for the Cushman Substation in January 1925 , and began work on the building shortly thereafter.[12]

Founded by James Madison Dougan in 1908, Dougan & Chrisman had offices in both Seattle and Portland, Oregon. In Portland the firm was known for construction of the Elks and Masonic temples, the Benson Hotel,

[8] Malloy and Ott, *Tacoma Public Utilities Story*, 88.
[9] "Bid for Cushman Substation to Be Called this Week," *Tacoma Sunday Ledger,* December 7, 1924, E-8.
[10] Bart Ripp, "A Very Juicy Past: Cushman Sub-Station Is an Elegant Reminder of Tacoma Public Utilities' Century of Providing Power," *Tacoma Daily Ledger,* November 29, 1993. 3. See also "Cushman Power Project Edition," *Tacoma Daily Ledger,* February 28, 1926.
[11] "Cushman Power Project Edition," *Tacoma Daily Ledger,* February 28, 1926, 11.
[12] "City Power Substation Bids Opened," *Tacoma Daily Ledger,* December 30, 1924, 1.

and the US National Bank Building, among others. In Seattle, the firm constructed the Virginia Mason Hospital, the Garfield School, and several state university buildings.[13]

Concrete for the foundations of the Cushman Substation was poured in March of 1925, with deep excavations required to allow for the huge generators the building would house.[14] The roof of the substation was poured in August.[15] By October, the distinctive metal windows were being installed, and much of the heavy electrical equipment had been installed in the adjoining switchyard.[16] In January 1926, "a giant 80-ton condenser" was the first piece of machinery tested at the substation, the success of which marked that the building and associated transmission lines and operating equipment were "practically ready to receive power from the Skokomish River."[17]

Designed to handle the power from both the Cushman No. 1 and the planned Cushman No. 2 powerhouses, the substation was constructed in the heart of one of Tacoma's residential districts. As such, "every effort was made to effect a design that was not only permanent and efficient in operation, but was also a beautiful piece of architecture and would harmonize with the surroundings."[18] Contemporary newspapers remarked on the Cushman Substation as not only "a model of electrical engineering, but its distinctive design will be in keeping with the residential section in which it will be constructed."[19] Cost of construction of the building was estimated at $150,000, with additional costs of operating and electrical equipment "representing a valuation of more than $550,000 when completed… The cost of the plant unit by unit as a whole is said to be far below the cost of other hydro-electric plants and will enable Tacoma to maintain its place in the industrial world as the home of the nation's cheapest electrical power."[20]

The three-story reinforced concrete building was constructed with

> an architectural treatment worthy of any building in the heart of the City. The cornice, pilasters, mouldings, etc. were all formed and poured monolithic with the main building. The surface treatment of the outside of the building, as well as all other exposed concrete on the block which the building occupies, is what is known as a "rubbed finish." This consists of rubbing the concrete surfaces, after being stripped, with a rough carborundum stone until all film, fins and unevenness disappears, and then painting with a neat cement grout and rubbing in with a fine carborundum stone until only enough material is left on the surface to fill all of the voids and produce a smooth sandstone-like appearance. This finish harmonizes very well with the aluminum finish used on the towers, transformers, switches, and other equipment in the outdoor portion of the substation.[21]

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[13] Ila L. Wakley, "James Madison Dougan," S. J. Clarke Publishing Company, *The USGenWeb Project*, accessed March 17, 2014, http://usgenweb.org/. http://files.usgwarchives.net/or/multnomah/bios/dougan444gbs.txt.
[14] "Pouring Concrete for New Substation," *Tacoma Daily Ledger,* March 9, 1925, 3.
[15] "Work being Speeded on Big City Substation," *Tacoma Daily Ledger,* August 16, 1925, A-4.
[16] "Getting Ready to Receive Cushman Current," *Tacoma Daily Ledger,* October 11, 1925, A-11.
[17] "Test of Machine's Success," *Tacoma Daily Ledger,* January 1, 1926, A-1.
[18] Ira S. Davisson and Llewellyn Evans, "Cushman Power Project," *1924–1925 Information Book of the Light Department, City of Tacoma, Washington,* 73. Washington State Archives, Puget Sound Region Branch, Tacoma Municipal Government Collection, Tacoma Public Utilities Division, Reports and Publications, PS611-81A-86.
[19] "Bids for Cushman Substation to Be Called This Week," E-8.
[20] Ibid.
[21] Davisson and Evans, "Cushman Power Project," 73.

As constructed, “one of the most interesting” features of the Cushman Substation “was the placing of thousands of feet of conduit in the floor slabs, walls and columns of the building.” High-voltage wiring from exterior bussing equipment entered the substation via basement tunnels. Concrete barriers separated and insulated the high-voltage busses, while lower-voltage circuits were distributed via iron conduits cast into the concrete structure of the building.[22]

By March 1926, there was sufficient water in the Lake Cushman reservoir to begin producing power.[23] The 44-mile-long Potlatch Transmission Line, extending from the Cushman No. 1 powerhouse to the Cushman Substation in Tacoma, was first energized on March 23, 1926.[24] At the formal dedication held in May, “the current from the dam was turned on in Washington, D.C., by President Calvin Coolidge using a key made by Lincoln High School students, which included gold from a Northern Pacific Railroad souvenir spike.”[25] The Cushman system has provided power for the city of Tacoma ever since.

From its inception in 1893, Tacoma’s public utility had sold power for commercial purposes in order to reduce the cost of residential power and light. The move to promote industrial expansion within the city directly influenced municipal power development. Following the opening of Cushman No. 1 and the Cushman Substation in 1926, several large industrial enterprises located plants in Tacoma. A consequent population boom and the availability of inexpensive electricity also encouraged consumers to purchase electric stoves, refrigerators, washing machines, and smaller appliances. In fact, demand was so great that by 1927, a year after Cushman No. 1 came online, the City Light department was promoting a second dam on the Skokomish River with the dire prediction that, without increased electrical output, Tacoma would “face a power shortage within three years.”[26]

In spring 1929, Tacoma City Light began construction of the second power plant on the Skokomish River, 2 miles downstream from the first. With the water discharged from Cushman No. 1, Cushman No. 2 utilized the remaining 480-foot elevation drop to the Hood Canal, a 240-foot-high arch dam, and a 13,000-foot-long tunnel to provide additional power for the city. Construction of Cushman No. 2 began none too soon: extreme drought in fall 1929 forced the city to rely in part on supplemental power supplied by the *U.S.S. Lexington*, which remained anchored in Tacoma harbor from December 18, 1929, through January 16, 1930.[27]

The combined Cushman Nos. 1 and 2 systems were poised to bring a total of 140,000 horsepower to Tacoma—50,000 from Cushman No. 1 and 90,000 from Cushman No. 2. As one report noted, “it is hard for

[22] Davisson and Evans, “Cushman Power Project,” 73.
[23] Malloy and Ott, *Tacoma Public Utilities Story*, 88; and Overland, *Early Settlement of Lake Cushman*, 40.
[24] Malloy and Ott, *Tacoma Public Utilities Story*, 88.
[25] Office of Historic Preservation, Community Development Department, “Cushman Power Project, Cushman Substation,” Survey-Inventory Form, Community Cultural Resource Survey, Reference No. 31650, April 1981, 2, on file at the Washington Department of Archaeology and Historic Preservation (hereafter DAHP).
[26] City of Tacoma, Department of Public Utilities, Light Division, *1926–27 Information Book* (n.p.: n.p., 1927), 18, Tacoma Public Utilities History Collection, Accession PS-20091012-02, Box 7116, Tacoma Public Utilities Archival Collection, Washington State Archives, Puget Sound Regional Branch (hereafter WSA-PSRB).
[27] “Report to December 31, 1929,” *Report and Information Book of the Light Division, Department of Public Utilities, City of Tacoma, Washington*, 16, Tacoma Public Utilities History Collection, Accession PS-20091012-02, Box 7116, Tacoma Public Utilities Archival Collection, WSA-PSRB.

the mind to grasp the significance of 50,000 horsepower of electrical energy. Picture an army of 1,000,000 men engaged in physical labor. Their combined effort would about equal this horsepower."[28]

In 1930, a journalist reported that "work on Cushman No. 2 project is being carried on seven days a week and 24 hours a day, as the power is urgently needed to supply the market at Tacoma."[29] The new Cushman No. 2 dam, a 240-foot, constant-radius, high-arch dam, rose to create Lake Kokanee.[30] The Cushman No. 2 powerhouse, which is located on the Skokomish Reservation, overlooking the Olympic Highway, was constructed by J. E. Bonnel and Son of Tacoma. The city's grand design for the Cushman No. 2 powerhouse exudes the sense of pride and progress felt by Tacoma City Light. The building draws upon neoclassical influences in civic architecture to express the significance of the facility to the functioning of the city.

On August 22, 1939, John D. Ross, chief administrator of Bonneville Power (and former head of Seattle City Light), addressed Congress on the status of Bonneville Dam (1934) and the newly proposed Grand Coulee Dam for which he sought federal funding. He said, "the enterprises the Pacific Northwest needs most for industrial development are those requiring large quantities of cheap electrical energy of which the region will soon have abundance." In a feature article, the *Seattle Post-Intelligencer* listed thirteen key regional units that provided power and light. Among them was "Tacoma City Light (public monopoly—at present America's lowest power rates)."[31]

By 1947, the City of Tacoma, Department of Public Utilities, Light Division, had begun construction on the Pearl Street Substation in Tacoma; in 1949, the transmission line was rerouted from the Cushman Substation to the Pearl Substation.[32] Blueprints for the "Pearl Street Switching Station Control House" are dated June 7, 1949, approved by engineer A. W. Francis. Although the transmission line continues on to the Cushman Substation, the historic alignment and terminus of the line have been altered. The Cushman Substation now acts as a storage building, and all original interior equipment has been removed. The switchyard, located on the Cushman Substation property, is still active, although it contains only modern equipment.

Historically, the substation was an integral part of the Cushman Hydroelectric Project, acting as terminus for the transmission line and therefore an essential resource directly related to the production and transmission of hydroelectric power to the citizens of Tacoma. Though the building exhibits excellent integrity of location, design, setting, materials, workmanship, feeling, and association, rerouting of the Potlatch Transmission Line

[28] "Cushman Project Visualized," [ca. 1925],] Tacoma Public Utilities History Collection, Accession PS-20091012-02, Box 7116, Tacoma Public Utilities Archival Collection, WSA-PSRB.
[29] "Cushman Power Plant No. 2 for Tacoma," *Western Construction News*, November 10, 1930: 538.
[30] Lisa Soderberg, "Cushman No. 1 Hydroelectric Power Plant," National Register of Historic Places Nomination Form, 1988, 8-1, on file at DAHP.
[31] John D. Ross, "Plentiful Electricity Seen as Stimulant. Accompanied by Quotes from the Author's Address to Congress and by a List of 'Key Units and Their Present Power and Light Services,'" *Seattle Post-Intelligencer*, August 22, 1939, Costello Scrapbooks, vol. 8, "Dams and Power," Seattle Public Library, Seattle, Washington.
[32] The Pearl Street Substation is located at 2402 Pearl Street North in Tacoma. The substation comprises one building, an outdoor switchyard, and one historic-era tower identical to those found on North 21st Street. The single-story building with a drive-under basement fronts east on Pearl, with parklike landscaping separating the substation from the suburban mini-mall development located east of Pearl Street. The Pearl Street Substation has seen few exterior alterations since initial construction: the windows appear to be original, as does the stucco cladding. Though all doors appear to be modern, they are in original openings. The building retains good integrity of design, workmanship, feeling, association, setting, and location, and fair integrity of materials.

to the Pearl Street Substation in 1949 and the subsequent removal of all power-related equipment from the interior of the Cushman Substation have rendered the building functionally disconnected from the rest of the Cushman system. However, the building is an excellent example of neoclassical-revival architecture, and has seen few alterations (apart from interior removal of equipment). The basic form, massing, and scale of the building, both interior and exterior, are intact.

The Cushman Substation is eligible for listing in the National Register at the local level for significance under Criterion A, associations with broad patterns of history, for the role it played in the growth of the city of Tacoma and the region due to the development of hydroelectric generation and its subsequent effect on the availability of affordable electricity. The Cushman Substation is the urban embodiment of the City of Tacoma's achievement in hydroelectric power production via development of the Cushman Hydroelectric Project. The substation housed the means for efficient and economical distribution of electricity, which enabled the region to grow and expand and, therefore, made the Cushman Substation one of the most important and influential buildings of its time.

The monumental architectural style reflected this ideology, creating a visual statement as to the importance of the city's recently completed municipal hydroelectric system. As such, the building is also eligible for listing in the NRHP at the local level for significance under Criterion C, architecture. The Cushman Substation is an excellent example of neoclassical revival style architecture, with which the City of Tacoma built the Cushman Hydroelectric Project facilities in the 1920s. The only urban building constructed concurrent with the Cushman Hydroelectric Project, the Cushman Substation is a visual representation of the importance of public energy facilities to regional growth. The monumental architectural style reflected the importance of efficient and economic distribution of energy, creating a visual statement as to the importance of the city's recently completed municipal hydroelectric system.

The period of significance is 1926–1949, the date construction was completed through the date the transmission line was rerouted and the historic terminus altered.

9. Major Bibliographical References

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Ross, John D. “Plentiful Electricity Seen as Stimulant. Accompanied by quotes from the author's address to Congress and by a list of ‘key units and their present power and light services.’” *Seattle Post-Intelligencer*, August 22, 1939. On file in Costello Scrapbooks, Vol. 8, “Dams and Power,” Seattle Public Library, Seattle, WA.

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-------. “Cushman No. 1 Hydroelectric Power Plant.” National Register of Historic Places Nomination Form. 1988. On file at Washington Department of Archaeology and Historic Preservation, Olympia.

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Previous documentation on file (NPS):

____preliminary determination of individual listing (36 CFR 67 has been requested)
____previously listed in the National Register
____previously determined eligible by the National Register
____designated a National Historic Landmark
____recorded by Historic American Buildings Survey #_____
____recorded by Historic American Engineering Record # _____
____recorded by Historic American Landscape Survey # _____

Primary location of additional data:

__X__State Historic Preservation Office
____Other State agency
____Federal agency
____Local government
____University
____Other
Name of repository: _____

Historic Resources Survey Number (if assigned):

10. Geographical Data

Acreage of Property 4.91
(Do not include previously listed resource acreage.)

UTM References NAD 1927 or X NAD 1983

Point	Zone	Northing	Easting	References
1	10	5234987	538770	Tower No. 1
2		5235001	538646	Tower No. 2
3		5234999	538536	Tower No. 3
4		5234998	538428	Tower No. 4
5		5234997	538320	Tower No. 5
6		5234996	538199	Tower No. 6
7		5234996	538094	Tower No. 7
8		5234995	537978	Tower No. 8
9		5234996	537861	Tower No. 9
10		5234993	537745	Tower No. 10
11		5234992	537630	Tower No. 11
12		5234991	537514	Tower No. 12
13		5234990	537408	Tower No. 13
14		5234991	537225	Tower No. 14
15		5234991	537042	Tower No. 15
16		5234991	536877	Tower No. 16
17		5234990	538797	Cushman Substation, NW Corner of Tax Parcel
18		5234990	538897	Cushman Substation, NE Corner of Tax Parcel
19		5234904	538798	Cushman Substation, SW Corner of Tax Parcel
20		5234996	538902	Cushman Substation, SE Corner of Tax Parcel

Verbal Boundary Description (Describe the boundaries of the property.)

The boundary begins midway between N Highland Street and N Winnifred Street in the median of North 21st Street in Tacoma, Washington, at the northwest corner of the tower. The boundary travels east along the north side of the median to the intersection of North 21st Street and North Proctor Street, where it angles southeast parallel to the transmission line to the intersection of North Adams Street. The boundary then travels east to North Washington Street, where it turns south to the intersection of North 19th Street, where it turns west to the intersection of North Adams Street where it turns north to the back to a point approximately 50 feet south of the southeast corner of the intersection of North Adams Street and North 21st Street, The boundary then angles northwest parallel to the transmission line to southeast corner of the tower at the intersection of North 21st and North Proctor. The boundary then travels west along the south side of the median to the southwest corner of the tower between N Highland Street and N Winnifred Street, where it turns north back to the point of beginning.

Boundary Justification (Explain why the boundaries were selected.)

The boundary includes all of Pierce County Tax Parcel 7475021970, which comprises the Cushman Substation, as well as the linear corridor containing the North 21st Street transmission towers.

11. Form Prepared By

name/title Natalie K. Perrin, M.S. / Architectural Historian

organization Historical Research Associates, Inc. (HRA) date March 17, 2014

street & number 909 N Beech Street Suite 210 telephone 503-247-1319

city or town Portland state OR zip code 97227

e-mail nperrin@hrassoc.com

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.
  A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Continuation Sheets**
- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

Name of Property: Cushman Substation
City or Vicinity: Tacoma
County: Pierce
State: Washington

Photographer: Greg Rainka, Historical Research Associates, Inc.
Date Photographed: August 2011

Description of Photograph(s) and number: See Continuation Sheet

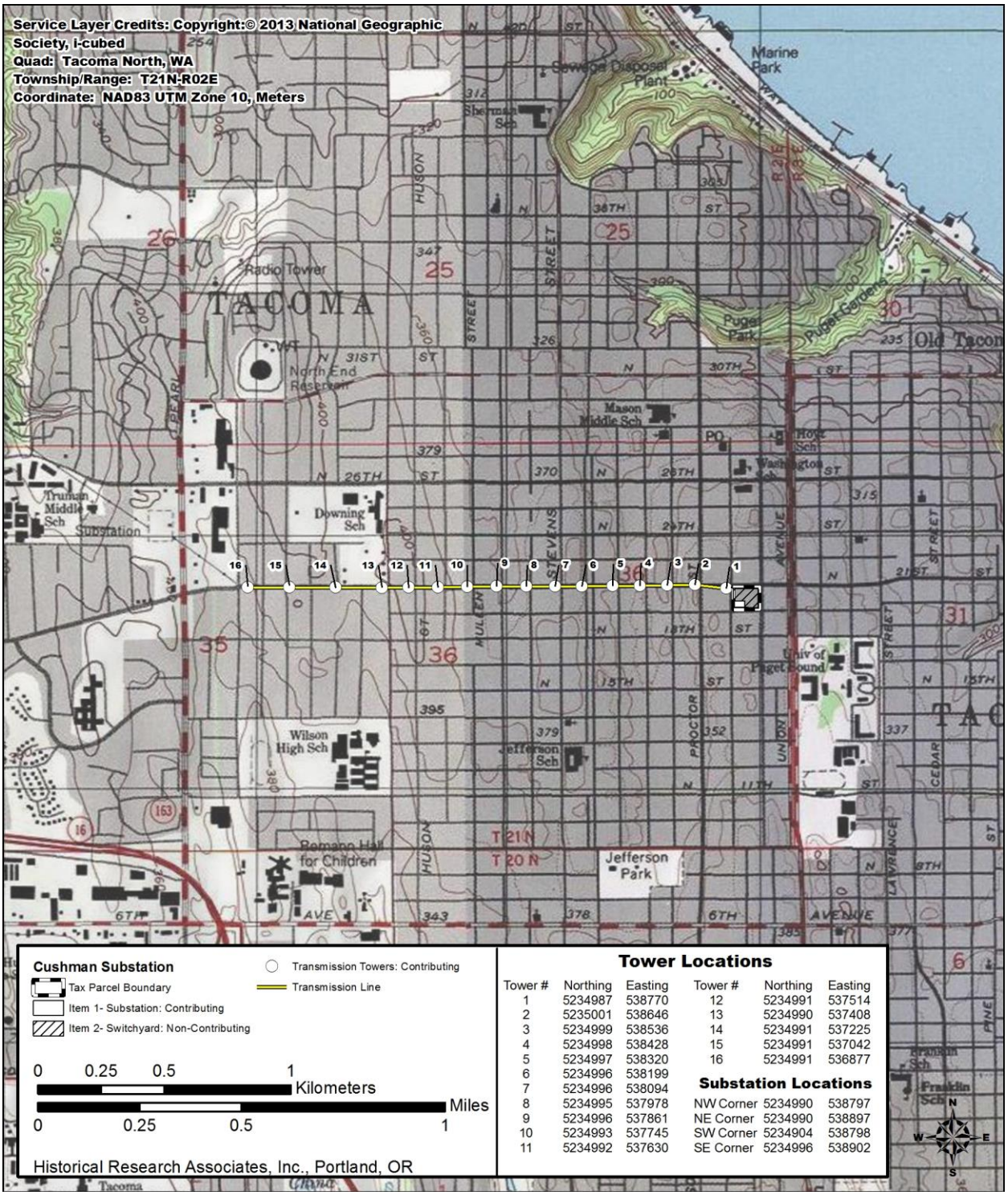
Property Owner: (Complete this item at the request of the SHPO or FPO.)

name City of Tacoma (Pat McCarty, Generation Manager, Tacoma Power)

street & number 3628 South 35th Street telephone 252-502-8600

city or town Tacoma state WA zip code 98409

Maps Continuation Sheet:



Map 1. Topographical Map of Cushman Substation showing UTM reference points.

Map 2. Aerial image of Cushman Substation showing UTM reference points.

Figures Continuation Sheet:

Figure 1. Cushman Substation, 1925, southwest oblique viewing northeast. Image courtesy of Tacoma Power.

Figure 2. Cushman Substation, 1925, southwest oblique (viewing northeast) with view to switchyard. Image courtesy of Tacoma Power.

Figure 3. Cushman Substation, 1925, southeast oblique (viewing northwest) with view of switchyard (no longer extant). Image courtesy of Tacoma Power.

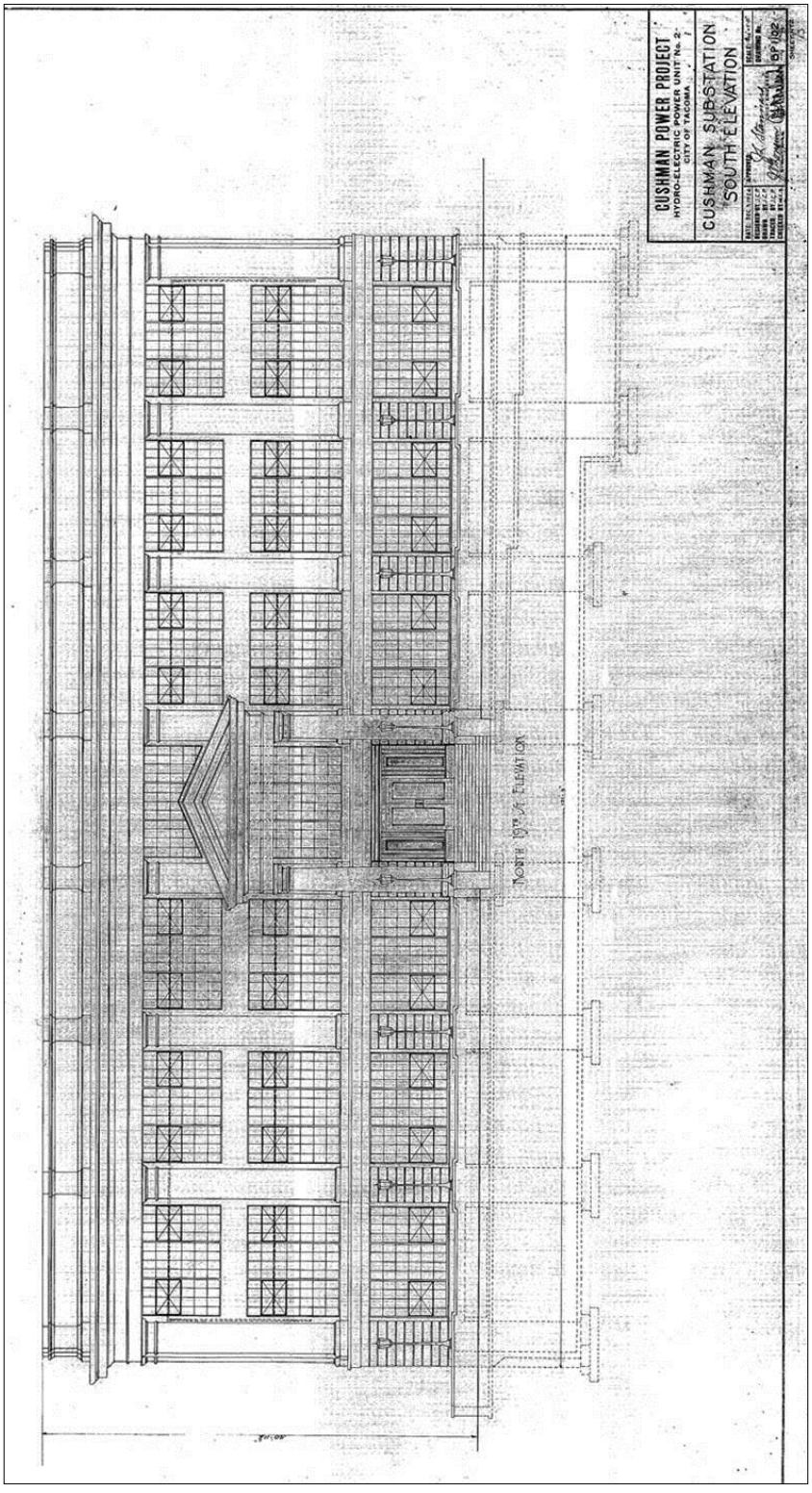


Figure 4. Design drawings of Cushman Substation, South Elevation, December 1924. Image courtesy of Tacoma Power.

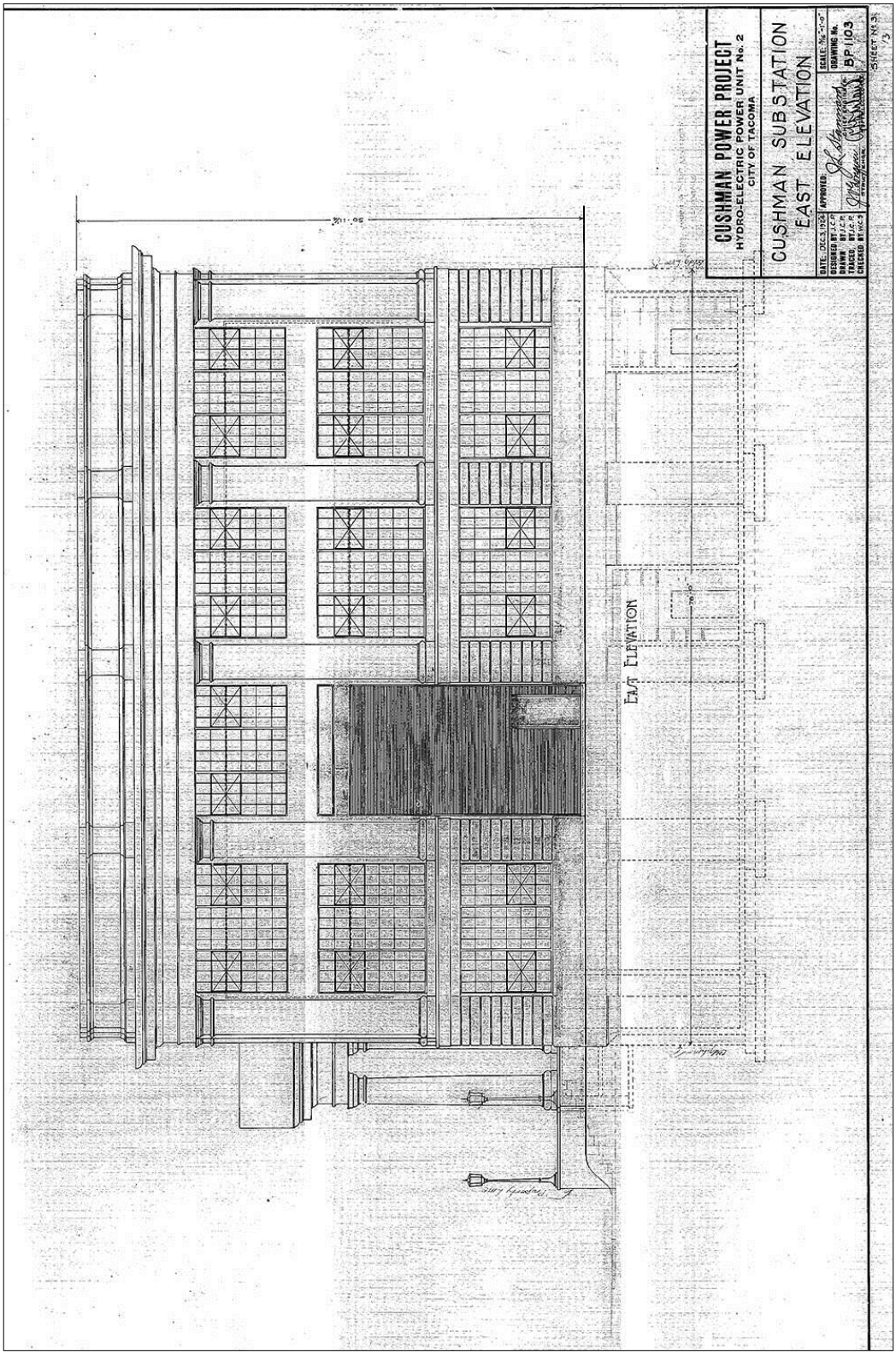


Figure 5. Design drawings of Cushman Substation, East Elevation, December 1924. Image courtesy of Tacoma Power.

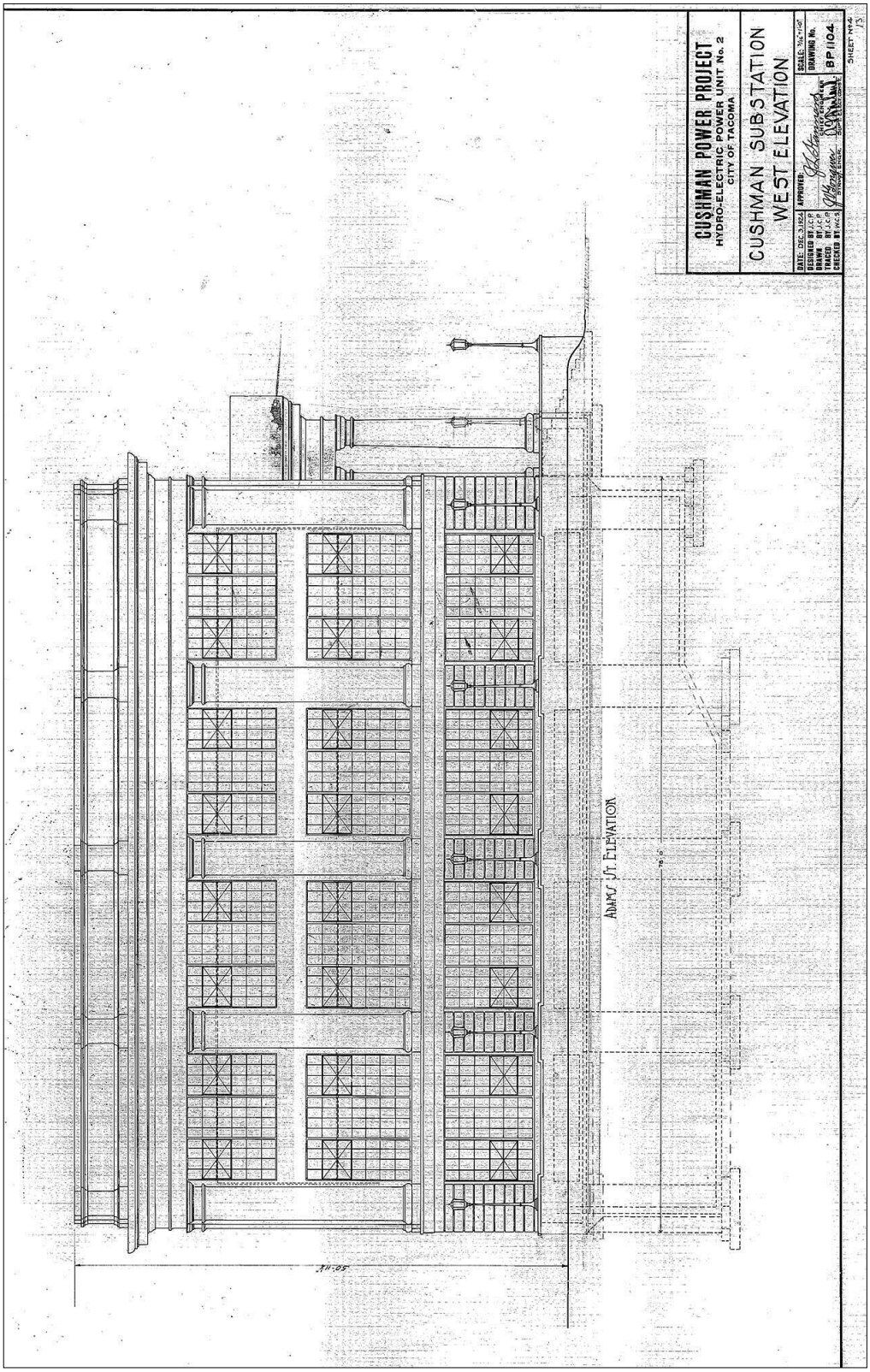


Figure 6. Design drawings of Cushman Substation, West Elevation, December 1924. Image courtesy of Tacoma Power.

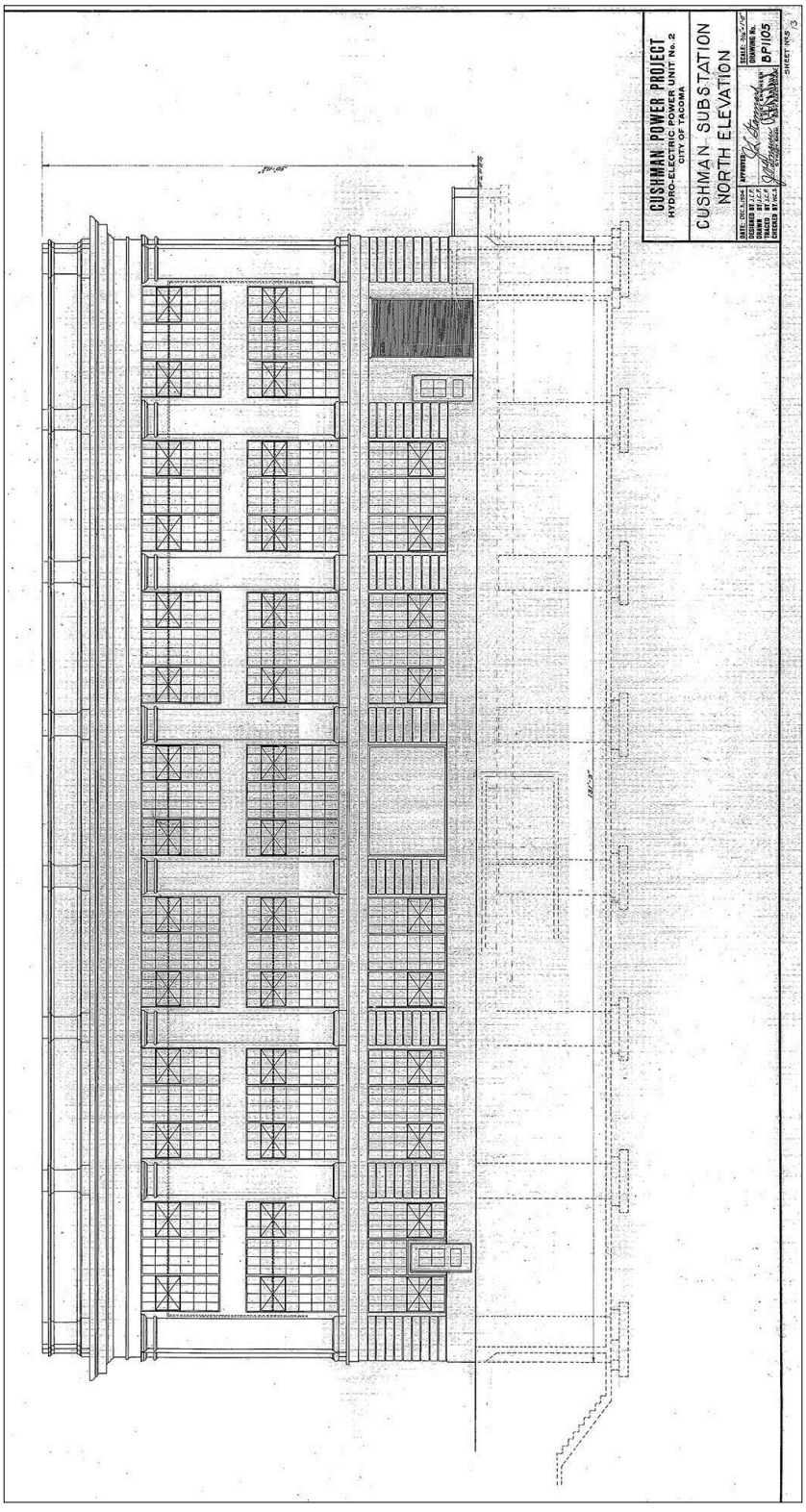


Figure 7. Design drawings of Cushman Substation, North Elevation, December 1924. Image courtesy of Tacoma Power.

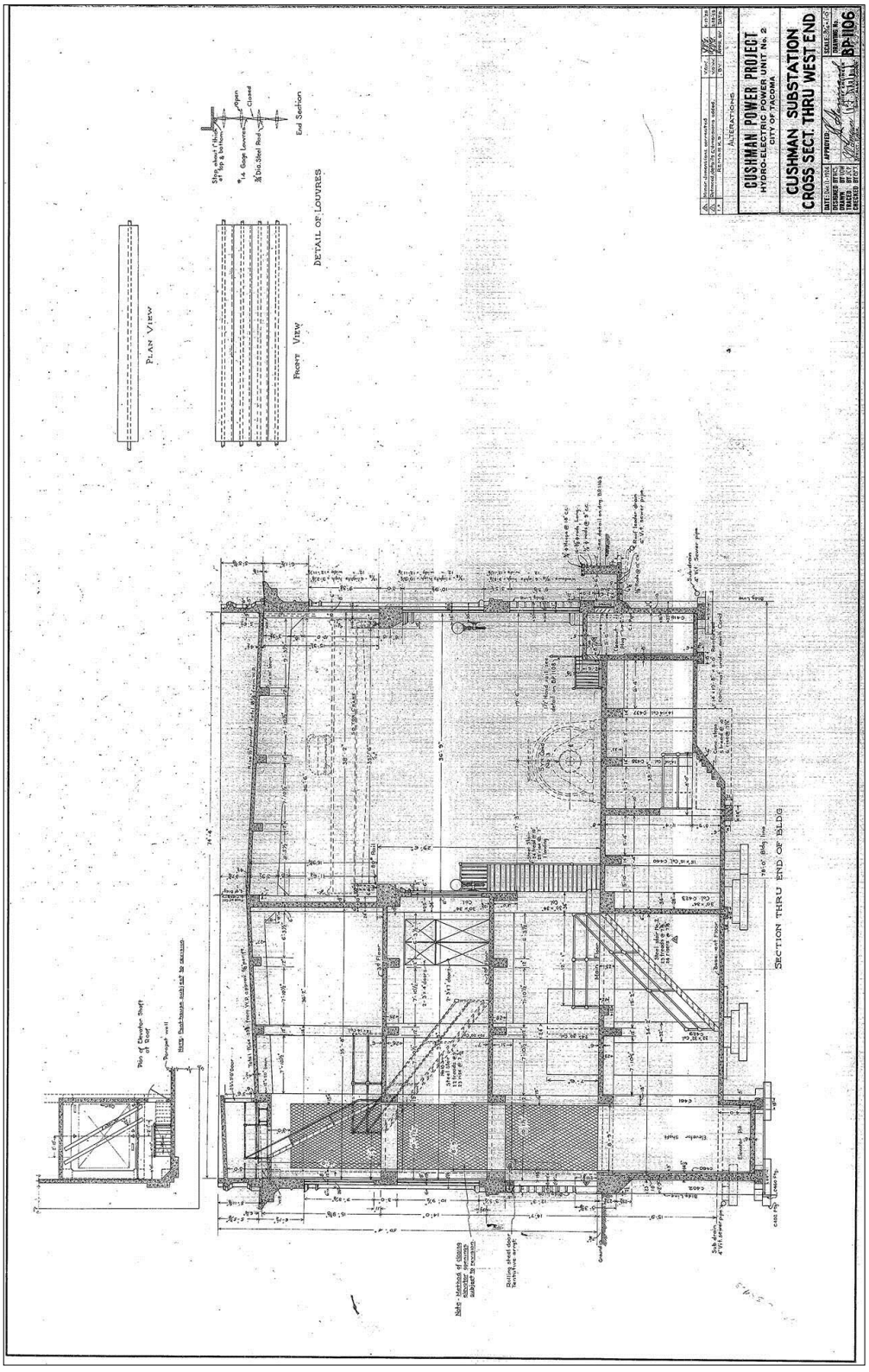


Figure 8. Design drawings of Cushman Substation, Cross Section through West End, December 1924. Image courtesy of Tacoma Power.

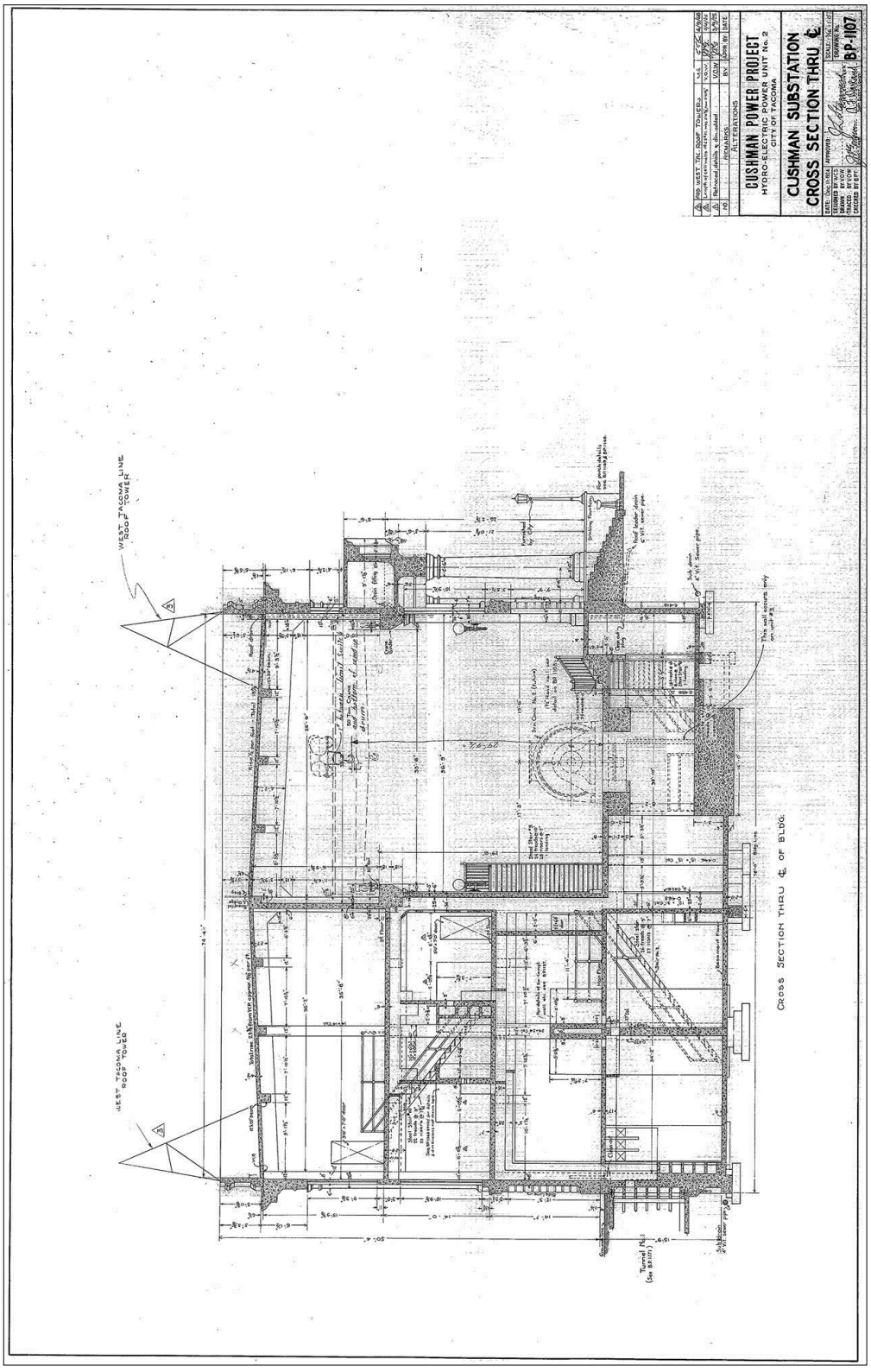


Figure 9. Design drawings of Cushman Substation, Cross Section through Center Line, December 1924. Image courtesy of Tacoma Power.

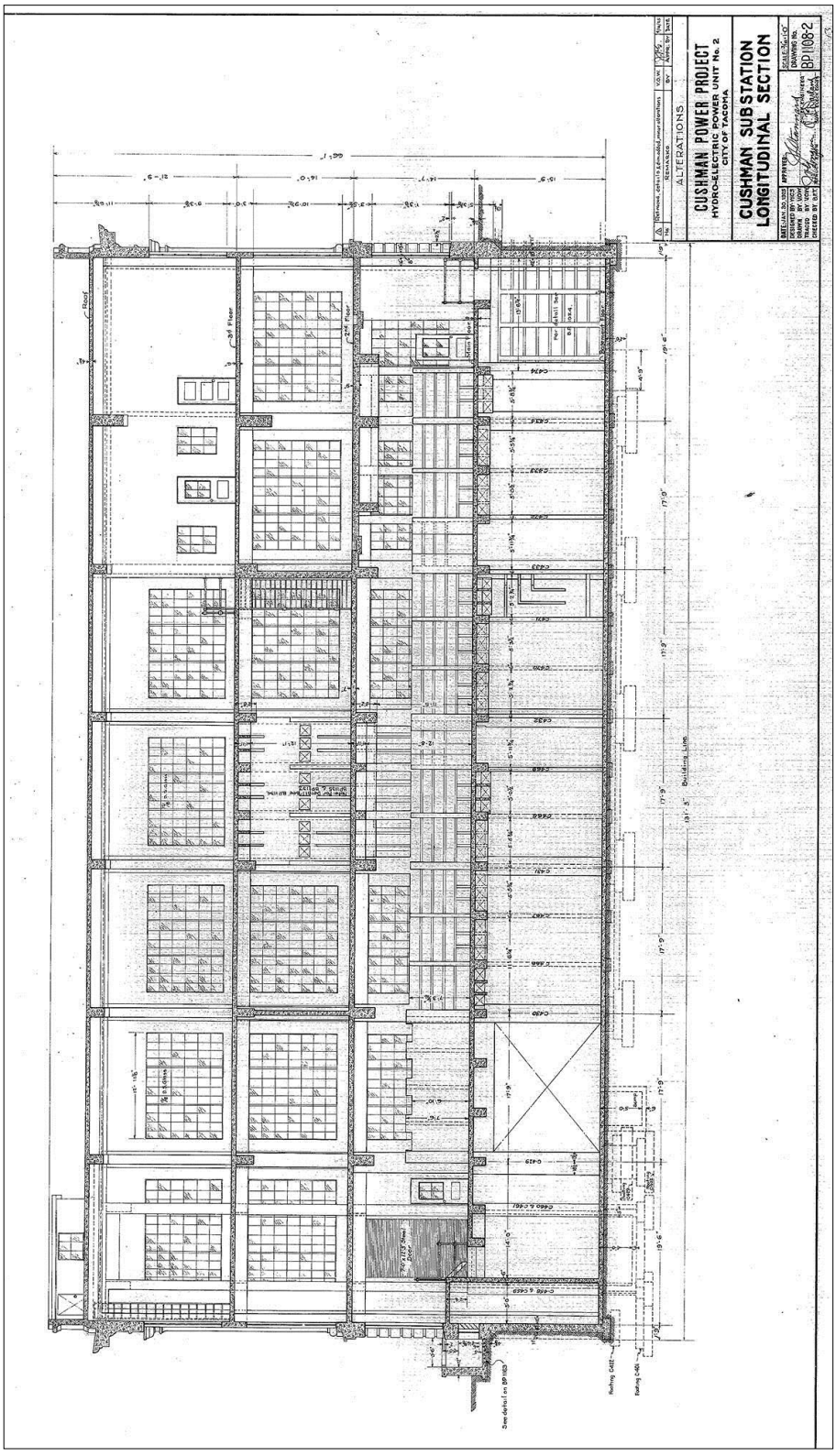


Figure 10. Design drawings of Cushman Substation, Longitudinal Section (with view to north exterior wall), December 1924. Image courtesy of Tacoma Power.

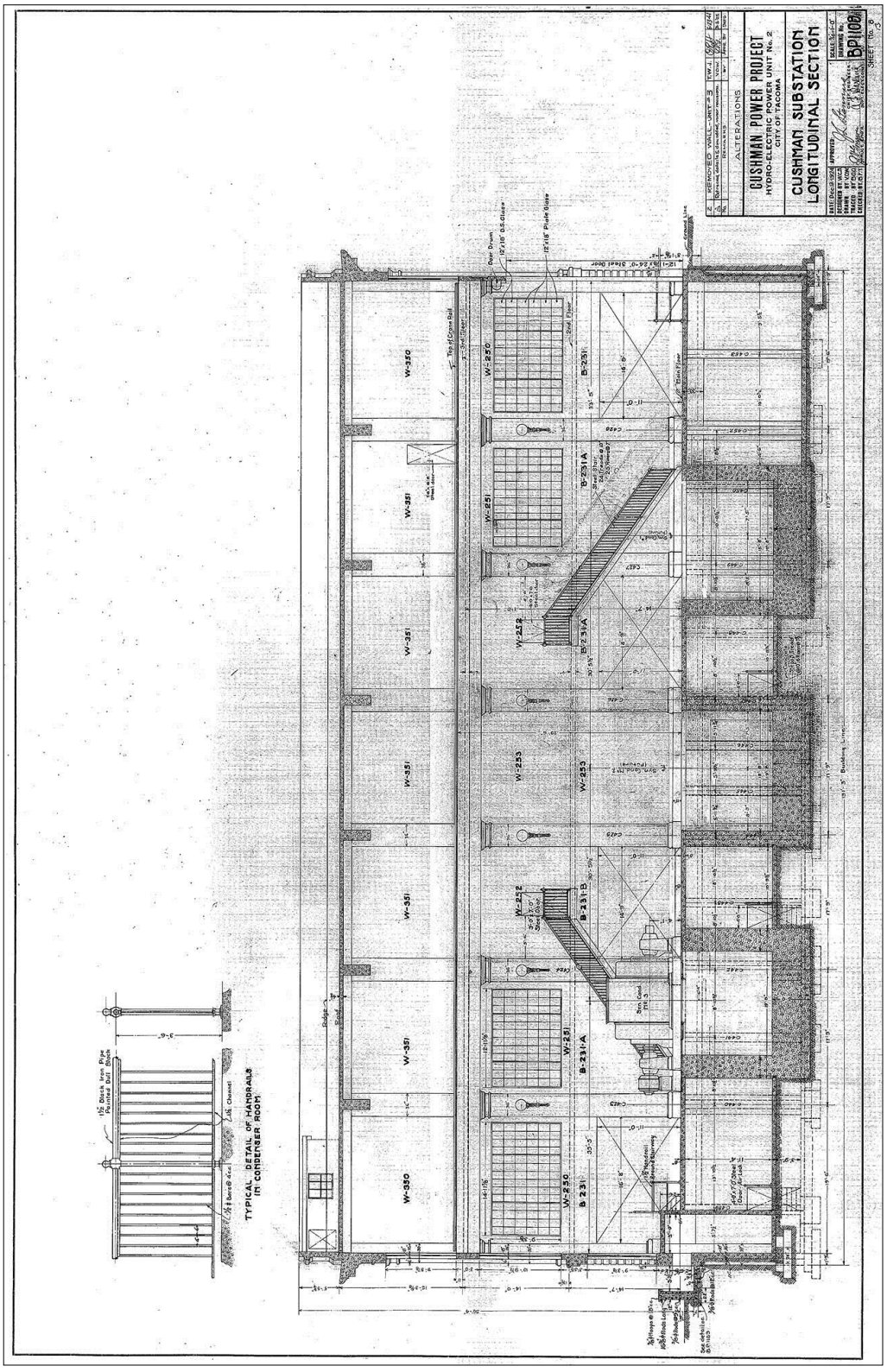


Figure 11. Design drawings of Cushman Substation, Longitudinal Section (with view to interior wall), December 1924. Image courtesy of Tacoma Power.

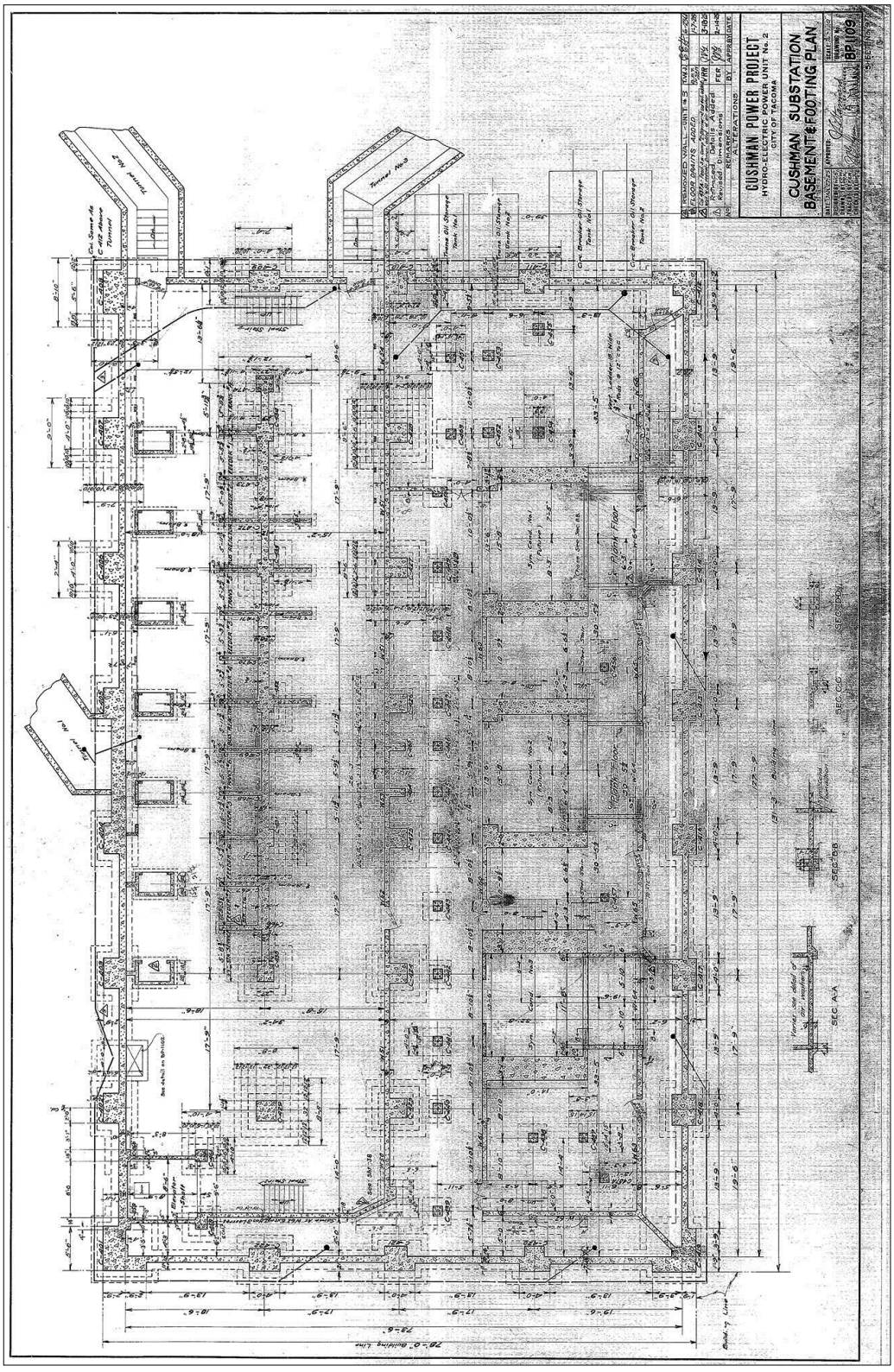


Figure 12. Design drawings of Cushman Substation, Basement and Footing Plan, December 1924. Image courtesy of Tacoma Power.

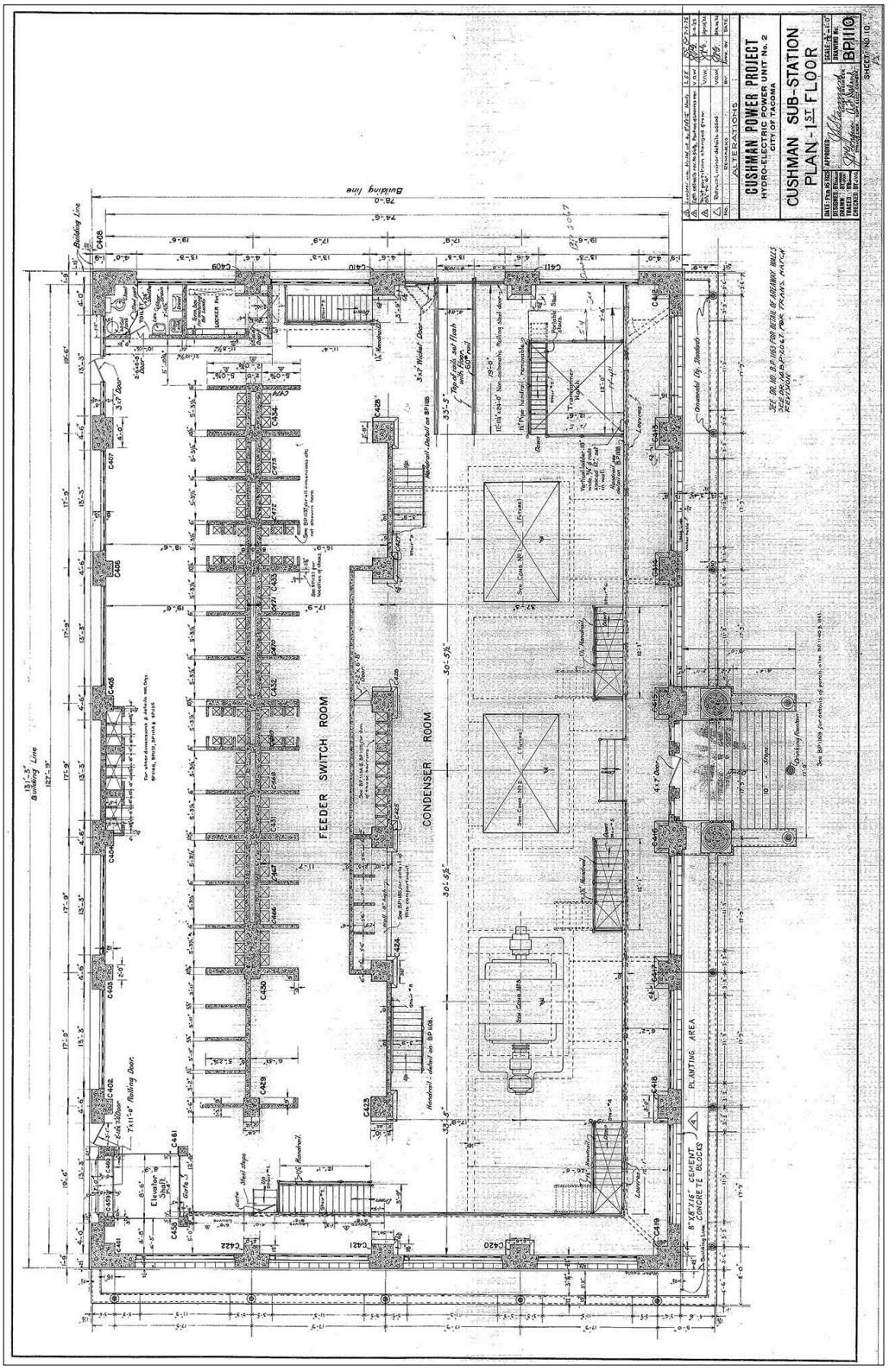


Figure 13. Design drawings of Cushman Substation, Plan of First Floor, December 1924. Image courtesy of Tacoma Power.

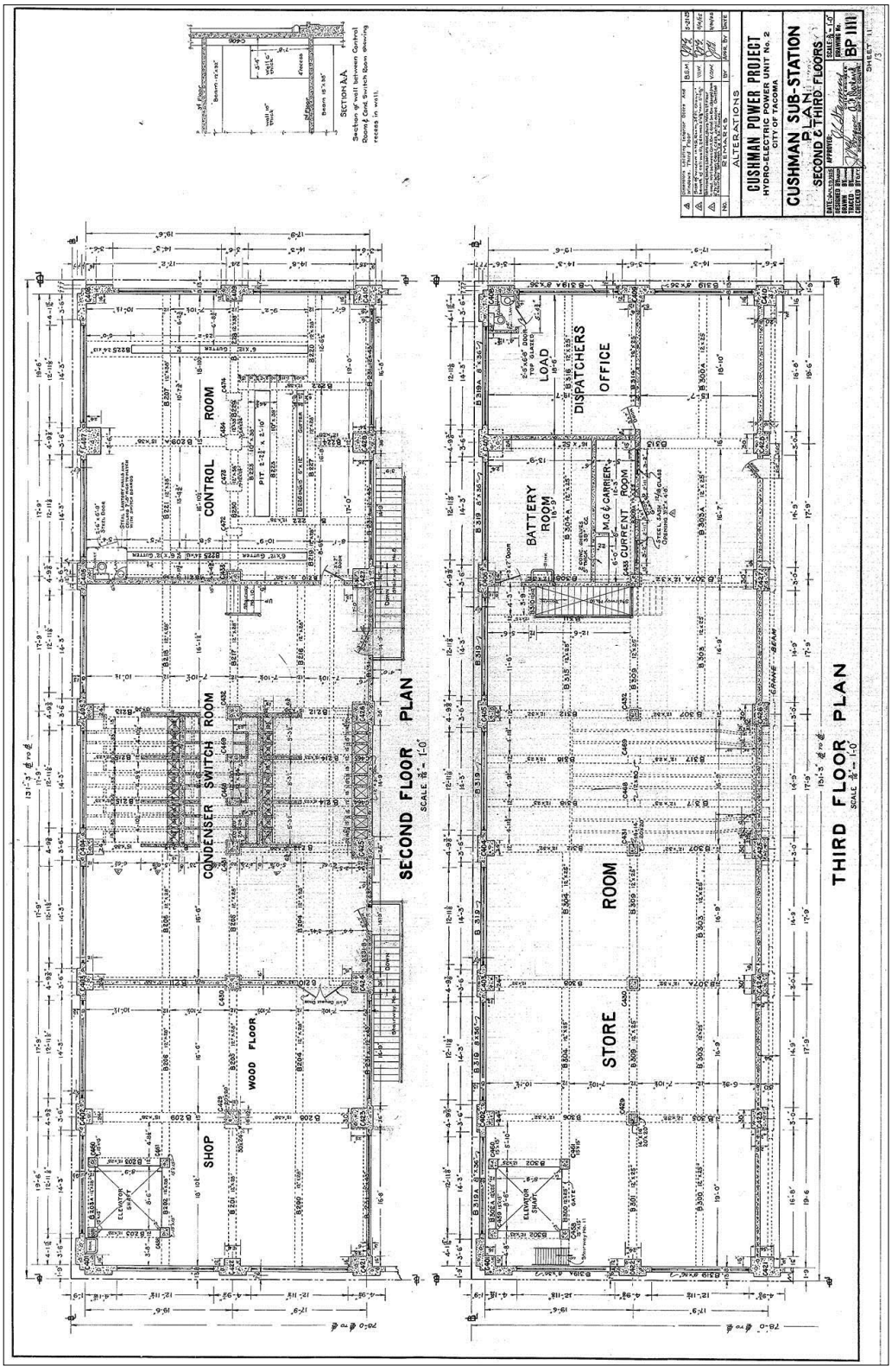


Figure 14. Design drawings of Cushman Substation, Plan of Second and Third Floors, December 1924. Image courtesy of Tacoma Power.

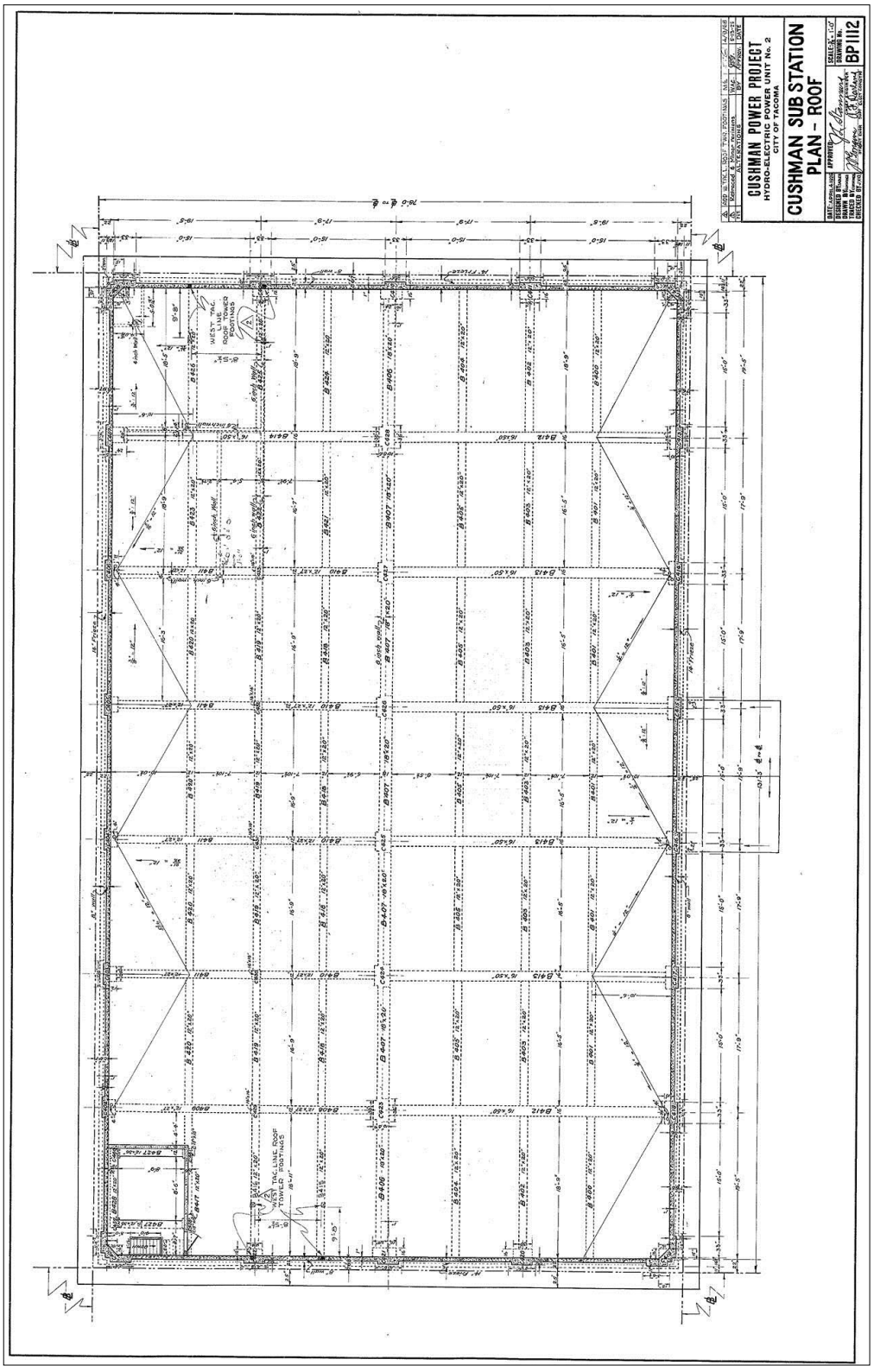


Figure 15. Design drawings of Cushman Substation, Plan of Roof, December 1924. Image courtesy of Tacoma Power.

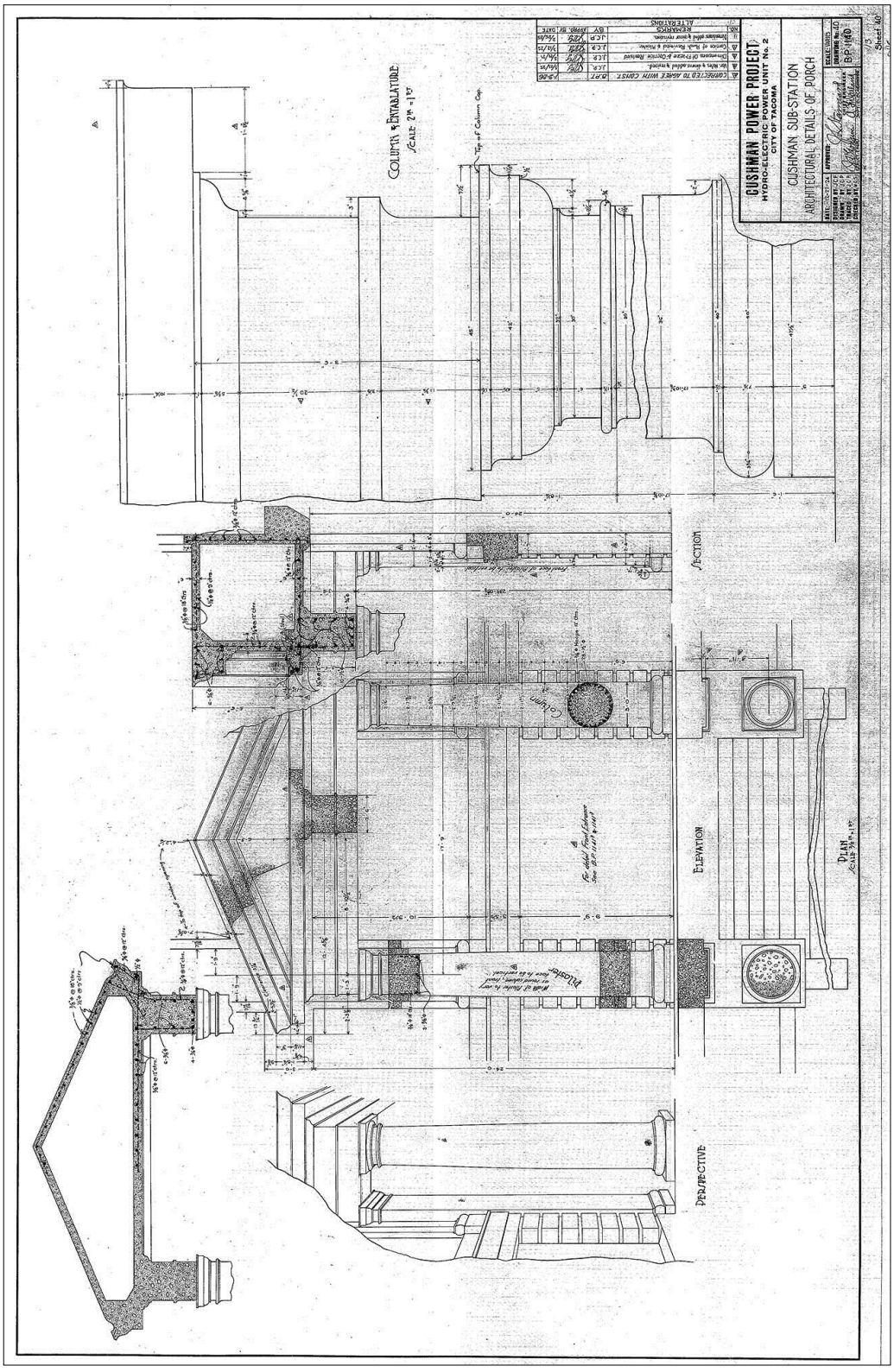


Figure 16. Design drawings of Cushman Substation, Architectural Details of Porch, December 1924. Image courtesy of Tacoma Power.

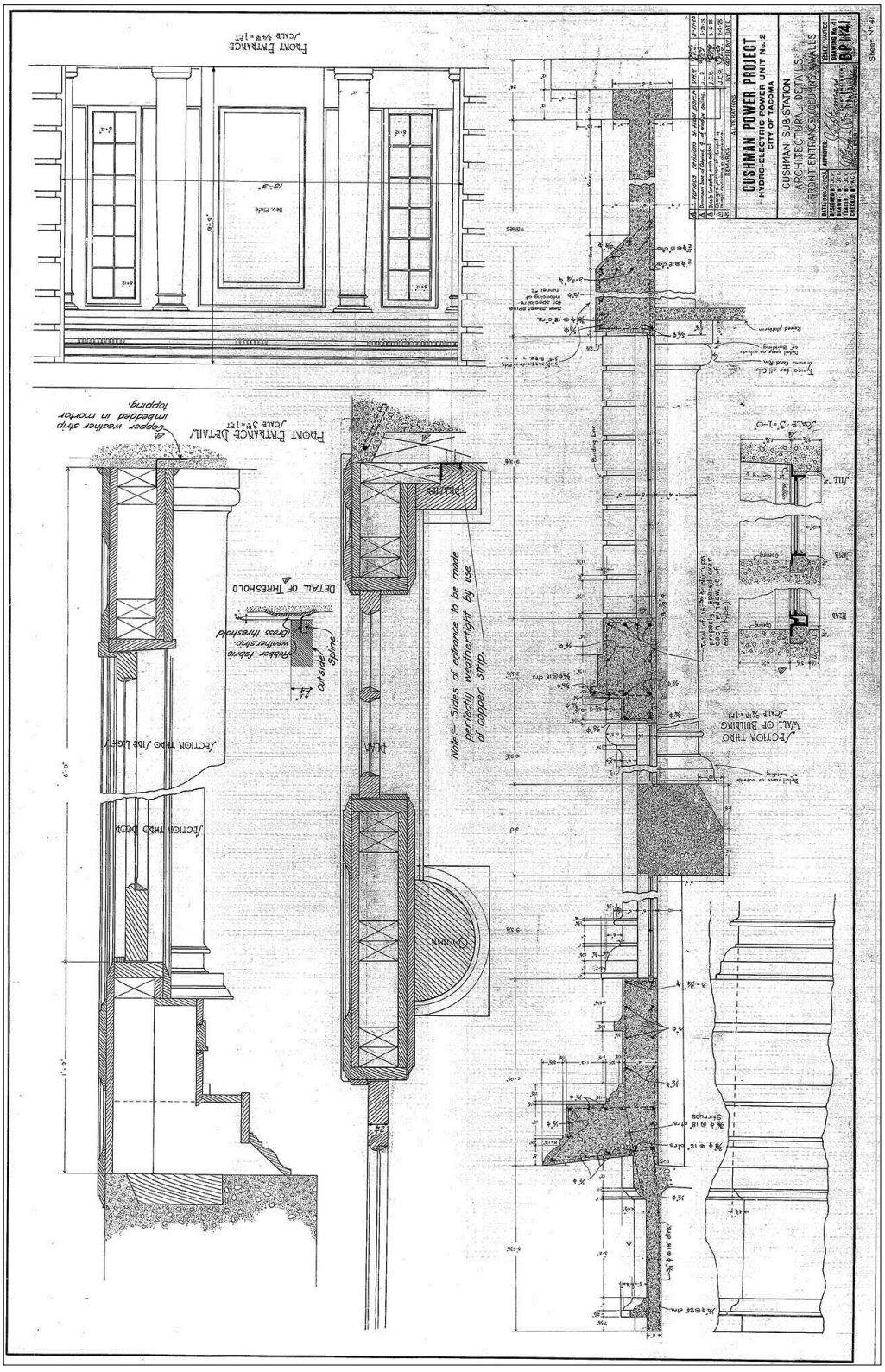


Figure 17. Design drawings of Cushman Substation, Architectural Details of Front Entrance Columns and Walls, December 1924. Image courtesy of Tacoma Power.

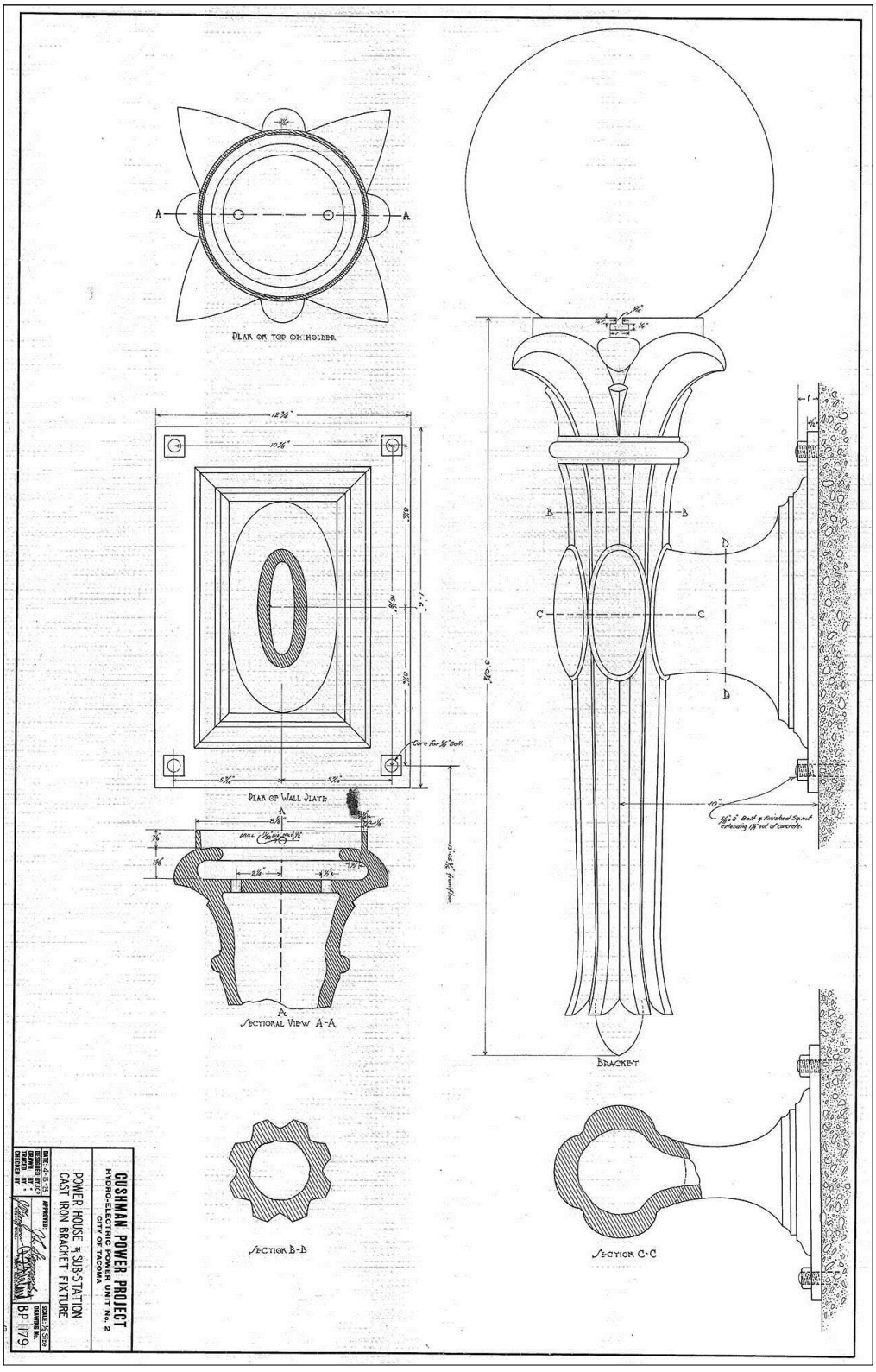


Figure 18. Design drawings of Cushman Substation, Cast Iron Bracket Fixture (lights), December 1924. Image courtesy of Tacoma Power.

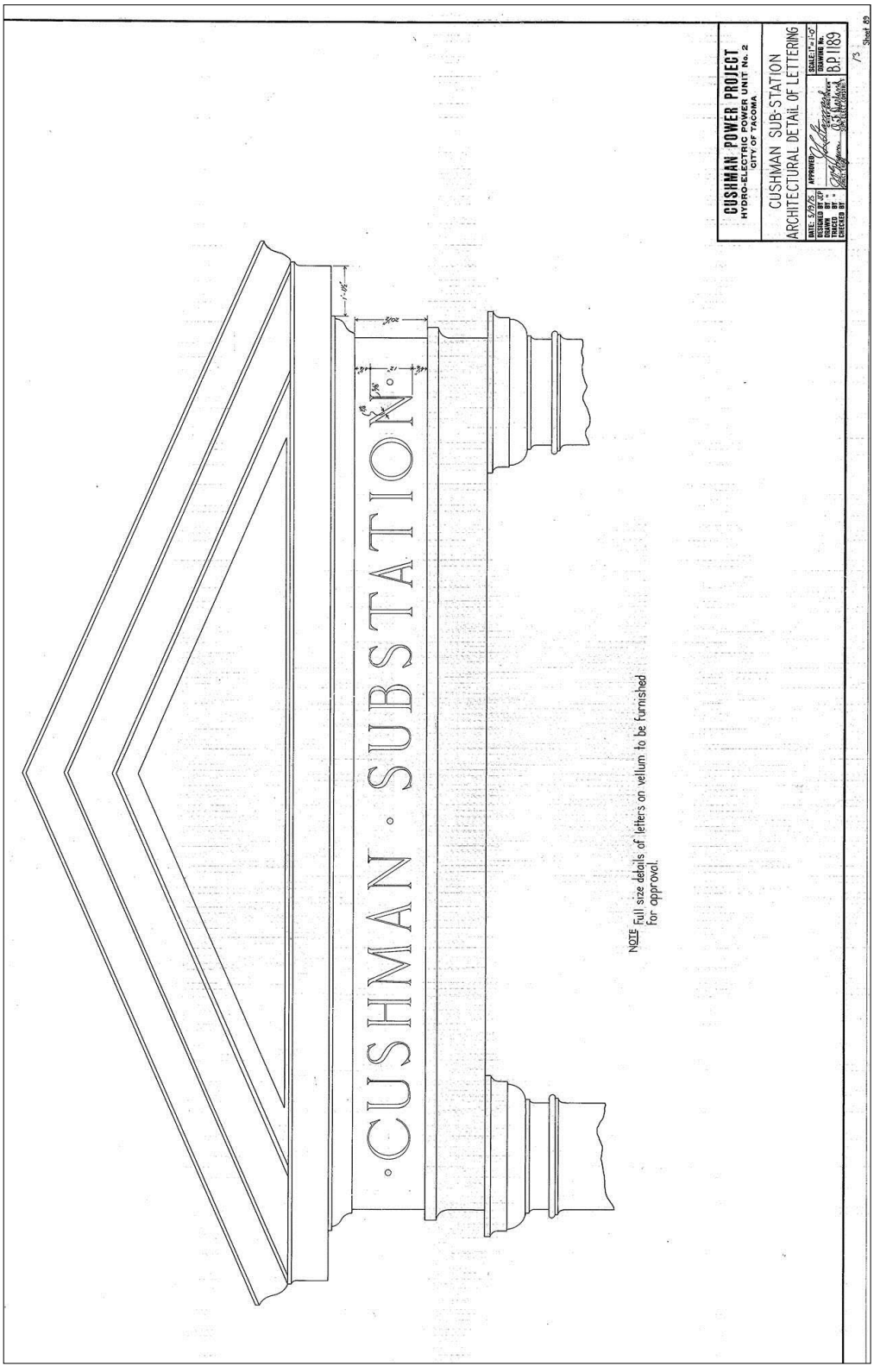


Figure 19. Design drawings of Cushman Substation, Architectural Detail of Lettering (over front entrance on south façade), December 1924. Image courtesy of Tacoma Power.

Photos Continuation Sheet:

PHOTOGRAPH LOG

Name of Property:	Cushman Substation
City:	Tacoma
County:	Pierce County
State:	Washington
Photographer:	Greg Rainka, M.A.
Date:	August 2011
Location of digital files:	Historical Research Associates, Inc. (Seattle, WA)

Photo 1 of 15. WA_PierceCounty_CushmanSubstation_0001. Cushman Substation, southeast oblique, viewing northwest.

Photo 2 of 15. WA_PierceCounty_CushmanSubstation_0002. View of the temple front entrance on the façade (south face) of Cushman Substation.

Photo 3 of 15. WA_PierceCounty_CushmanSubstation_0003. Southwest oblique of Cushman Substation, viewing northeast.

Photo 4 of 15. WA_PierceCounty_CushmanSubstation_0004. Northwest oblique of Cushman Substation, viewing southeast.

Photo 5 of 15. WA_PierceCounty_CushmanSubstation_0005. Viewing east to the exterior, modern switchyard (noncontributing) of Cushman Substation.

Photo 6 of 15. WA_PierceCounty_CushmanSubstation_0006. Viewing west to the exterior, modern switchyard (noncontributing) at Cushman Substation.

Photo 7 of 15. WA_PierceCounty_CushmanSubstation_0007. Northeast oblique of Cushman Substation, viewing southwest.

Photo 8 of 15. WA_PierceCounty_CushmanSubstation_0008. Detail of the original cast concrete lamp posts located on the northwest corner of Cushman Substation. The globes are modern plastic.

Photo 9 of 15. WA_PierceCounty_CushmanSubstation_0009. Interior of Cushman Substation, which is now used for storage. Note the decorative lighting, gantry crane (at ceiling), and voluminous interior space three stories high. Engaged pilasters are visible on both the south wall (pictured right) and interior wall (pictured left).

Photo 10 of 15. WA_PierceCounty_CushmanSubstation_0010. Detail of decorative light fixture at Cushman Substation.

Photo 11 of 15. WA_PierceCounty_CushmanSubstation_0011. Former control room at Cushman Substation. The equipment is modern, though the room retains its original function.

Photo 12 of 15. WA_PierceCounty_CushmanSubstation_0012. Second floor room at Cushman Substation, now used for storage.

Photo 13 of 15. WA_PierceCounty_CushmanSubstation_0013. Battery room at Cushman Substation.

Photo 14 of 15. WA_PierceCounty_CushmanSubstation_0014. Stair from second to third level at Cushman Substation.

Photo 15 of 15. WA_PierceCounty_CushmanSubstation_0015. Basement level of Cushman Substation.